

Historic, archived document

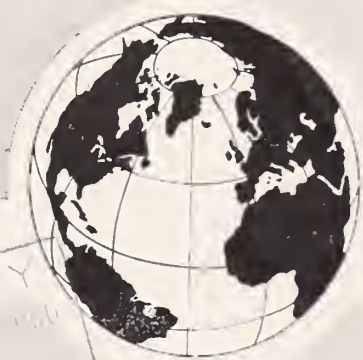
Do not assume content reflects current scientific knowledge, policies, or practices.

6

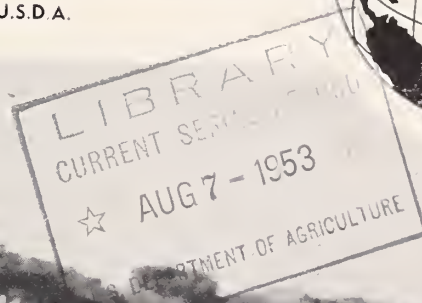
1.9
Ec7For

Foreign Agriculture

ISSUED BY
FOREIGN AGRICULTURAL SERVICE, U.S.D.A.
WASHINGTON, D. C.



JULY-AUGUST
1953



TRANSPLANTING RICE

Foreign Agriculture

Vol. XVII

JULY-AUGUST 1953

Nos. 7-8

IN THIS ISSUE

	PAGE
<i>The Political Significance of the Rice Bowl of Asia</i>	127
<i>The Cedar of Lebanon</i>	131
<i>International Farm Organization Meets in Rome</i>	133
<i>South African Marketing Controls</i>	134
<i>Land Reform in Poland</i>	139
<i>Point Four Trainees in the Commonwealth of Puerto Rico</i>	145

FRONT COVER

Transplanting Rice in Thailand

Bundles of rice seedlings await transplanting.
(Photo courtesy of Graham Quate.)

BACK COVER

The Rice Bowl of Asia

Thailand, Burma, and Indochina are justly called the Rice Bowl of Asia: They are the only countries on that continent that produce enough rice for their own needs and to spare.

NEWS NOTES

Foreign Agriculture's Outstanding Articles for 1952 Selected

Fred J. Rossiter's "Food and World Tension" and George A. Woolley's "Boomtown, S. A.—The Story of Tingo Mariá" have been selected as the outstanding articles to appear in *Foreign Agriculture* during 1952. A panel of five judges, headed by Francis A. Flood, Assistant Director of Foreign

Agricultural Service, chose the articles a few weeks ago for their readability, timeliness, lasting value, and basic importance to agricultural progress.

Mr. Rossiter is Associate Director of FAS and Mr. Woolley is an Extension Specialist with the Institute of Inter-American Affairs in Lima, Peru. When Mr. Woolley wrote his prize-winning story he was doing extension work for the Peruvian-United States experiment station at Tingo Mariá.

This is the second year that FAS has acknowledged the outstanding contributions that have been made to its journal. And this year, as last, one award was given to a writer inside FAS and one to a writer outside. In addition, honorable mention was given to articles by Robert N. Anderson, Elwyn F. Chase, Jr., Robert L. Gastineau, Edson J. Hambleton, Henry Hopp, Ford M. Milam, and W. M. Myers.

United States Wheat for Pakistan

An emergency shipment of 1 million long tons of wheat to alleviate starvation and famine conditions in Pakistan is on its way from United States ports. The wheat comes from stocks of the Commodity Credit Corporation acquired under price support operations.

Mutual Security Director Harold Stassen has stated that the wheat grant will, besides averting famine this year, immeasurably assist the longer-term internal effort to prevent a recurrence of famine and to achieve economic strength.

Credit for photos is given as follows: p. 131, Near East News Association, photo by Paul Harden; pp. 124-138 State Information Office, Union of South Africa.

FOREIGN AGRICULTURE

ALICE FRAY NELSON, EDITOR

A monthly publication of the Foreign Agricultural Service of the United States Department of Agriculture, Washington, D. C. The matter contained herein is published by direction of the Secretary of Agriculture as administrative information required for proper transaction of the public business. The printing of this publication has been approved by the Director of the Bureau of the Budget (November 1, 1950). Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., at 15 cents per copy, or by subscription at the rate of \$1.50 per year, domestic; \$2.00 per year, foreign. Postage stamps will not be accepted in payment.

The Political Significance Of the Rice Bowl of Asia

By WILHELM ANDERSON

Since World War II the Far East has come into increasing prominence in world affairs. Some 620 million human beings who inhabit vast areas of the Far East have been freed of European colonialism; the peoples and Government of Japan have undergone a social and political evolution in the direction of democracy and free institutions; the peoples of the mainland of China, Outer Mongolia, Manchuria, and North Korea have come under the domination of the Soviet Union. These events not only have intimately affected the life and destiny of half the world's population but also have significantly affected our own relations with these new governments.

In the United States, Canada, the Argentine, Australia, and New Zealand food has generally been abundantly available and often in such surplus supply as not to make those who live there cognizant of the importance of food to the existence and well-being of men and nations elsewhere in the world. In these favored areas food tends to be taken for granted because it is so abundantly available in almost unlimited quantities. It is not generally so elsewhere in the world and particularly not so in the Far East, except in the Rice Bowl—Burma, Indochina, and Thailand. Because it is so here the Rice Bowl is of political significance.

In the deficit food grain areas of the Far East the major portion of each man's labor goes to produce or procure food for himself and family, and most of the remainder to produce or procure clothing and shelter, with little if any left for the amenities of life. Existence here is hard and unrelenting. It is one with which Americans generally have little familiarity. The constant and primary concern of men in the deficit countries of the Far East is food and how to obtain it in sufficient quantity to maintain themselves. The constant and primary concern also of their governments is how to obtain and pay for sufficient food grain to maintain their people.

All this is perhaps known with intimacy by the

NOTE.—The Far East as used in this paper is the land area stretching east from Afghanistan through South and Southeast Asia, then northward through the mainland of China, Outer Mongolia, Manchuria, Korea, and Japan.

rulers of the Soviet Union, for they have had long association with these and with similar conditions.

The Soviet Union and its satellites now control all the traditionally food-grain-surplus areas of Europe and all those of Asia except the Rice Bowl, Formosa, and South Korea—three areas that before the war accounted for a rice surplus of 8 million metric tons annually, 6 million of which were consumed in the Far East. The Rice Bowl alone exported nearly 6 million tons of rice. Since the war Korea has been a net importer of rice and Formosa an exporter of a mere few thousand tons. And exports from the Rice Bowl have been cut in half, partly because its population has grown and is eating better and partly because of internal strife. Nevertheless, it is still an important source of rice in an area where rice means food. Obviously, Communist domination of the Rice Bowl would have tremendous implications.

Customers of the Rice Bowl

It should be observed at the outset that economic statistics on the Rice Bowl countries—Burma, Indochina, and Thailand—are inadequate and particularly so for the Associated States of Indochina. At best they are well informed estimates.

India, Japan, Indonesia, Malaysia,¹ and Ceylon depend heavily on the Rice Bowl for the rice they need to import. Indonesia, before the war a relatively small importer of rice, has had to contend with a growing rice deficit in recent years brought about by a population increase that is outdistancing rice production at an alarming rate. In 1952 Indonesia imported an all-time high of 740,000 metric tons of rice, almost three-fourths of which came from the Rice Bowl.

Ceylon and Malaysia have traditionally been rice deficit areas. In the five prewar years they received an annual average of 429,000 and 772,000 metric

¹ Malaysia includes the Federation of Malaya, Singapore, Brunei, Sarawak, and North Borneo.

Dr. Anderson is Head, Far East Division, Regional Investigations Branch, FAS.

tons, respectively, from the Rice Bowl. In recent years the rice deficit of these countries, despite vigorous attempts to increase domestic production, has been in the neighborhood of 400,000 tons for Ceylon and 500,000 tons for Malaysia. The Rice Bowl has been the principal source from which these deficits have been met.

Japan in the five prewar years obtained an annual average of 290,000 metric tons of rice from the Rice Bowl and the remainder of its requirements—2 million tons—from Korea and Formosa. It still gets a few thousand tons from Formosa but none from Korea, now a net importer of rice. Nor has the Rice Bowl been able to meet Japan's needs; it has supplied only about 500,000 tons annually in the past 3 years. Most of the rest of Japan's food grain requirements have been met by the United States, mostly in the form of wheat, rice, and barley.

India, which before the war met its food grain deficits from the surpluses of the Rice Bowl, has also had to look elsewhere for supplies since the war and has also gotten most of them from the United States. But the economy of India, like that of Japan, is not well adjusted on a long-time basis to earning dollars in sufficient volume to make large annual purchases of food grains from dollar areas, particularly when it has to turn to these same areas for other indispensable commodities such as heavy machinery, iron and steel, motorized equipment, sulfur, and phosphate rock.

Fifteen years ago the Far East, excluding China, Outer Mongolia, and Manchuria, was a net exporter of some 2 million tons of rice. During the war, however, production of rice dropped and only in the past 2 years has it exceeded prewar, and that increase has been slight. As a result the area now has an annual net food grain deficit of some 7 million tons.

This deficit is not wholly in rice; some of it is in wheat and wheat flour, for some Asiatics prefer wheat to rice, notably those in West Pakistan and certain parts of India and the Philippines. Japan is meeting part of its rice deficit by wheat and barley, first, because rice in sufficient quantities is not available and, second, because wheat and barley are much cheaper. Part of the deficit in rice is being met by rice imports from the Americas, Egypt, and southern Europe. A big question to wheat exporters and to deficit countries in the Far East is, Could the deficit not be met within Asia itself as an overflow from the Rice Bowl?

	Deficit (in metric tons)
India -----	3,000,000
Japan -----	3,400,000
Indonesia -----	600,000
Malaysia -----	700,000
Ceylon -----	600,000
South Korea -----	400,000
Pakistan -----	1,200,000
Philippines -----	200,000
<hr/>	
Total -----	10,100,000
	<i>Surplus</i>
Rice Bowl -----	3,000,000
Formosa -----	100,000
Net deficit -----	7,000,000

Potentialities of the Rice Bowl

The three Rice Bowl countries have a total land area of more than 476 million acres and a population estimated in 1952 at 69 million. Cropland and fallow occupy 53 million acres of which nearly 37 million are devoted to rice production. Rice, other cereals, pulses, and peanuts occupy more than 40 million acres. Before the war when this area was exporting about 6 million tons of milled rice, it supported a population of about 54 million. Since the war only in Thailand has rice production been brought back to prewar levels. Production in Burma has made some recovery but is still considerably below prewar, and Indochina's output and trade have been seriously curtailed by continued military conflict. As a result, rice exports from the area in recent years have been averaging only 3 million tons, nearly all of this coming from Thailand and Burma.

In Thailand rice production is now about 60 percent higher than before the war. This increase is in general due to increased acreage. During the past decade Thailand, according to official statistics, has increased its cropland acreage by 5 million, most of which has been rice.² Half of this increase occurred in the rapidly developing, sparsely populated Northeast Region, which now produces a substantial rice surplus for export. A large part of the remaining 2.5 million increase took place in the Central Plain.

Indochina is producing much less rice than it did before the war, and yields have traditionally been low—averaging under 700 pounds milled basis per acre, compared with 840 for Burma and 875 for

² Although the magnitude of this increase may be overstated by government statistics, there is no doubt that a very substantial increase in crop area has taken place.

Thailand. In the five prewar years an average of 14 million acres of rice was grown in Indochina; this acreage went above 15 million in 1942 but has currently dropped to about 12.5 million.

Burma, before the war the world's largest exporter of rice, now produces about 80 percent of prewar output and exports only about a third as much. In 1940 rice was produced on 12.4 million acres of the country's 21.4 million acres of cropland (a net sown area of 17.4 million acres plus 4 million acres in fallow). Current plantings are on the order of 10 million. Significant, however, are land use figures of the Burmese Government for 1948-49 that show not only the 21.4 million acres of cropland but also 19 million acres of wasteland that are suitable for cultivation, making for a potential cropland area of about 40 million. Even though experience may later indicate that parts of the 19 million acres may not be economically suitable for cultivation, the potential appears to be large.

In assessing the potential of the Rice Bowl countries as a whole for production of rice and other food crops, some assistance may be had from looking at a neighbor—Japan.

Japan grows enough food on its 15 million acres

of cropland to feed 69 million of its 86 million people. It feeds more than four persons on each acre.

By contrast, the three Rice Bowl countries, with 45.5 million acres of cropland now in use and a population of 69 million produces enough to feed these people and 20 million more. In other words, an acre in the Rice Bowl feeds only a little more than two persons, compared with four in Japan.

Japan, unlike the Rice Bowl generally, has a highly perfected controlled irrigation system that, together with good cultural practices, provides high unit area yields. Too, Japan is currently manufacturing and using about 430,000 metric tons annually of net nitrogen and about 300,000 tons of P_2O_5 . Only negligible amounts of chemical fertilizer have thus far been used commercially in the Rice Bowl countries. The potential increase in yields of rice and other food crops that might be expected by the judicious use of chemical fertilizer has not as yet been well established, but it is undoubtedly large.

As for irrigation, expansion is planned or under way in Thailand and Indochina. In Thailand, irrigation systems, both public and private, now serve about 2.6 million acres of cropland, 15 per-

TABLE 1.—*Exports of milled rice from the Rice Bowl countries of Asia (Burma, Thailand, and Indochina) by country of destination, average 1936-40, 1946-50 and annual 1946-52*

Country of destination	1936-40 Average	1946	1947	1948	1949	1950	1946-50 Average	1951	1952
Asia:									
India and Pakistan.....	1,719	239	386	677	752	281	467	548	533
Ceylon.....	429	44	110	320	346	454	255	385	245
Malaysia ¹	772	367	248	409	476	511	402	526	421
Japan.....	290	(2)	(2)	(2)	158	498	131	555	460
Formosa.....	(2)	(2)	(2)	(2)	(2)	43	8	(2)	(2)
Korea.....	(2)	(2)	(2)	(2)	(2)	30	6	(2)	50
Indonesia.....	87	18	100	139	273	294	165	450	529
China.....	194	68	251	286	127	41	154	20	(2)
Hong Kong.....	515	191	78	109	72	163	123	107	188
Philippines.....	55	42	18	70	63	6	40	110	30
Other.....	14	(2)	(2)	19	2	46	14	(2)	29
Total.....	4,075	969	1,191	2,029	2,269	2,367	1,765	2,701	2,485
Middle East and Africa.....	101	(3)	(3)	12	19	90	24	(3)	31
French Colonies.....	131	24	19	92	52	59	49	126	53
United Kingdom.....	102	(3)	2	30	62	36	26	(3)	3
Europe excluding United Kingdom.....	859	(3)	(3)	34	67	134	47	131	44
North and South America.....	144	(3)	(3)	(2)	(3)	4	(3)	(3)	(3)
Other countries.....	220	2	30	2	30	82	30	221	339
Grand total.....	5,632	995	1,242	2,199	2,499	2,772	1,941	3,179	2,955

¹ Includes Federation of Malaya, Singapore, Brunei, Sarawak, North Borneo.

² If any, included in other Asia.

³ If any, included in other countries.

TABLE 2.—*Land utilization, Rice Bowl countries of Asia (Burma, Thailand, and Indochina), 1951-52¹*

[In 1,000 acres]

Item	Burma	Thailand	Indochina	Total
Total land area-----	167,545	126,878	181,866	476,289
Forest area-----	96,600	80,000	76,600	253,200
Wasteland and other-----	49,945	29,878	90,266	170,089
Cropland in fallow-----	6,500	(2)	1,000	7,500
Cropland in use ^{3,4} -----	14,500	17,000	14,000	45,500
Planted area: ^{1,5}				
Rice-----	9,730	14,468	12,600	36,798
Other cereals-----	1,014	120	250	1,384
Pulses and peanuts-----	1,673	400	300	2,373
Sesame and coconuts-----	1,381	240	70	1,691
Rubber-----	114	680	232	1,026
Other-----	1,588	1,192	548	3,328

¹ Mostly estimates based on the best available information; crop reporting, land classification, and other such surveys are not well developed in these countries.

² Insignificant.

³ Does not include double cropping.

⁴ Excludes cultivated areas outside of Divisional Burma and areas of shifting cultivation in Thailand and Indochina.

⁵ Includes double cropping.

cent of the total. The Thai Government's irrigation program, now in various stages of construction, has in view extending water control to 2 million additional acres by the close of 1957. In Indochina, there is an extensive dike and drainage system, within which about a million acres were under controlled irrigation before the war in Tonkin and Annam. Present irrigation programs envisage the extension of controlled water to 1.5 million additional acres in Cochinchina and Cambodia. In Burma the total area irrigated in 1948-49 by all irrigation devices was less than 10 percent of the cropland—1,347,804 acres. Most of this was in rice, but approximately 90 percent of the rice acreage in Burma is grown under rain-fed conditions, with the land lying idle during much of the year. Controlled irrigation on this land would make double cropping possible on much of it.

The foregoing may provide some rough measure of the magnitude of the potential in the Rice Bowl for increasing food production on the 53 million acres of cropland now in use and lying fallow. Without adding any new land to existing croplands in the Rice Bowl, experience in Japan and elsewhere indicate that total food grain production could be doubled in the course of two decades by improvements in and extension of controlled irrigation systems, by the judicious use of commercial

TABLE 3.—*Area, production, and exports of milled rice, Rice Bowl countries of Asia (Burma, Thailand, and Indochina), average, 1935-39, 1945-49 and annual 1945-52*

Year ¹	Area ²	Production (milled)	Exports (milled)
	1,000 acres	1,000 metric tons	1,000 metric tons
1935-39 average-----	34,064	12,239	5,632
1945-----	25,202	7,653	995
1946-----	27,381	8,675	1,242
1947-----	32,942	11,196	2,199
1948-----	35,603	11,621	2,499
1949-----	33,763	11,564	2,772
1945-49 average-----	30,978	10,142	1,941
1950-----	34,448	11,754	3,179
1951-----	35,774	12,021	2,955
1952-----	34,583	12,332	(3)

¹ Area, production, and exports on calendar year basis.

² Harvested area for Burma and Thailand. Area for Indochina believed to be planted area.

³ Not available. Estimated at 3 million metric tons.

fertilizer, and by improvements in seed stocks and cultural practices generally.

If account is also taken of opportunities to expand the cropland base, another 12 million to 22 million acres might perhaps be brought under cultivation in the three countries, making a total cropland base for the Rice Bowl of from 65 million to 75 million acres. The potential there is very considerable, perhaps sufficient to feed 60 million to 80 million additional people, such as will probably be added to the population of India, Ceylon, Malayasia, and Japan during the next 15 years.

With improved cultural practices, then, and increased use of commercial fertilizer, improved and extended irrigation and with additional cropland brought into cultivation, it would seem that the food grain needs of the free countries of Asia could be met by the overflow from the Rice Bowl.

A Communist-Dominated Rice Bowl

Free political institutions and free governments are not indigenous to the Far East. How well such institutions may be made to flourish in a strange environment, after recent transplanting, only time can tell. The availability of an adequate food supply appears to be a requisite to the growth and flourishing of free political institutions.

To survive, the free governments of the Far East must devise means of feeding their people without dependence on the Communist bloc. If this dependence is once firmly established, free political institutions are likely to wither and die quickly from total want of nourishment.

The Cedar of Lebanon

By T. E. SHAW

Durable, easily worked cedar of Lebanon was a favorite wood of the ancients. Solomon used it in the construction of the temple at Jerusalem. The first international traders, the Phoenicians, used it for their ships. And the Egyptians and Greeks built their temples and palaces and ships from it. In fact, cedarwood was so popular that by the very early Christian Era the wood was beginning to be in short supply and the indiscriminate cutting of cedar trees was forbidden. But over the centuries the great forests continued to dwindle and in modern times have been only fragments. These few groves are now being protected by the Government of Lebanon and each year seeds and small cedar trees are being planted. The cedar will probably never be so plentiful as in ancient times nor enter so much into commerce, but it has a value that transcends the commercial: it has a religious and cultural significance that is the result of its history.

The cedar of Lebanon now grows only in the Taurus Mountains of southern Turkey, in Cyprus, where it is represented by a short-leaved variety, and in the coast range of mountains in Lebanon at elevations of 5,000 to 6,000 feet. In Lebanon, it seems to prefer the more humid north and west exposures. Its habitat is one of great climatic extremes; the winters are cold with heavy falls of snow, and the summers are long, hot, and extremely dry. Under such rigorous conditions, the cedar has precarious existence. Man and the goat have made it more than precarious; they have made it impossible in all but a few small areas. There is evidence, in Lebanon, that the tree once grew on more favorable sites. It was probably excluded as the pressure for agricultural land was intensified by increases in population, for in Lebanon the better mountain land is terraced, planted with fruit trees, and irrigated wherever possible.

Botanists call the cedar of Lebanon *Cedrus libanensis* Juss. (syn. *C. Loud*). According to Dinsmore, it has several Arab names, including Arz Lubnan and Arz-ur-Rabb. I have heard it referred to in America as the "tall" cedar of Lebanon. This

is a misnomer, for the tree is broad rather than tall and has great width of crown. It is a true cedar; the genus belongs to the pine family. Its only close relatives are the *Cedrus deodara*, or deodar cedar, of India and the *Cedrus atlantica*, or Atlas cedar, of northwest Africa. In fact these two species are so closely related that they are hardly more than varieties or forms of the cedar of Lebanon.

The cedar of Lebanon bears a superficial resemblance to the larch, or tamarack, of North America, with its clustered needles and upright cones, but there the resemblance ceases. The cedar does not shed its foliage in autumn, as the larch does; its cones are much larger; its growth rate is slower;



Branches of the cedar of Lebanon are rarely broken by heavy loads of snow.

Mr. Shaw is Forester, Point Four, American Embassy, Beirut, Lebanon.

and its wood has higher technical qualities. Cedarwood is durable, presents a pleasing appearance, and lends itself to the art of the wood carver. I have seen carvings in old buildings in Lebanon and understand why the ancients had such a high regard for cedarwood.

Heights of 130 feet have been recorded for the cedar of Lebanon, but it seldom grows more than 80 feet tall; it has a large diameter and is a very sturdy tree. The long horizontal branches are capable of bearing heavy loads of snow; even when one breaks, the exposed wood resists rot well. And the tree has the ability to live for centuries.

The cedar of Lebanon is a tree with many recommendations: It is the national emblem of the country whose name it bears; it has spiritual and sentimental values not only to the Lebanese but also to people in many other countries of the world, and these values are translated into something very practical when they attract tourists; the tree produces valuable wood; and it has no serious insect or fungus enemies. The last three recommendations compensate, at least to a considerable degree, for the major economic liability of the species, its slow growth rate.

The balance sheet would seem to indicate the desirability of helping the cedar regain at least a part of its former importance. Where can this be done? Can it be done economically?

Because the tree grows slowly, reforestation is not attractive to private capital; therefore, it has to be tried by government on government land, and that is where the Government of Lebanon has started. Can reforestation be done economically? This question can be answered only by experimentation, and that is what the Government of Lebanon is doing.

If the remaining stands of the cedar of Lebanon were large in number and well distributed, natural regeneration would be the obvious starting point. But the remaining stands are small and few in number, so the government must resort to artificial regeneration.

Fortunately, enough is known about the regeneration of cedar of Lebanon on an artificial basis to start the work; unknown facts can be learned through year-to-year experimentation. There is sufficient information on seed collection and extraction to do a practical job. Some data are available on the number of seed per pound and on the percentage of total cone weight that seed composes. It

is known that seed can be stored successfully for a year by leaving it in the cone, although this method has not been checked against such alternatives as sealed cold storage of the seed. One experiment indicates that germination percentage can be increased by pretreatment of the seed before sowing, but further experimentation along this line is desirable. The seeds are oily, have rather poor keeping qualities, and lack dormancy. The seedlings are highly sensitive to drought.

In the actual forest planting operations of the government, the best results have been secured from direct seeding on terraces that had been carefully prepared with a heavy tractor, ripper, and angledozer. Seedlings planted on the same area did not thrive as well. Only a part of the terraces was seeded and planted in this experiment, which was started in the autumn of 1951; the remainder was left for planting in the fall of 1952 to determine the effect of preparing the site a year in advance of planting. Another feature of this experiment was the interplanting of black locust (*Robinia pseudoacacia*) on a part of the area in 1952 to find out whether the protective influence of this rapid grower would be helpful to the cedar.

Prior to this experiment, another had been made in which the planting of seedlings and direct seeding had been tried on a less intensive site preparation basis, with smaller terraces prepared by hand. The results were disappointing.

It will be necessary to do follow-up work on these experiments and to try other methods on a "pilot plant" basis before definite conclusions can be reached. It is particularly important to learn which method will produce the largest number of successfully established trees at the lowest cost.

Finally, a word on the subject of protection. Fire does not seem to be much of a problem in Lebanon; I have seen only one small burn in my travels through the country. But protection against livestock, particularly against the roving flocks of goats and sheep, is as serious as any fire problem in the United States. Young plantations and areas of natural regeneration must be protected by fences or patrol; without these provisions, reforestation will fail. An exception might be made to this statement in the case of some communal lands where goats have been excluded, but these are not the areas where the cedar of Lebanon will be planted in any quantity.

International Farm Organization Meets in Rome

By KNOWLTON NASH

A two point program to moderate price fluctuations in international trade of farm products has been offered by world farm leaders.

Meeting in Rome at the Sixth Ordinary General Meeting of the International Federation of Agricultural Producers, more than 200 farm leaders from about 30 countries unanimously agreed on the program. The Meeting was held June 5-13. The delegates endorsed the idea of achieving a greater measure of stability in prices "through a series of international commodity agreements and through the distribution of surpluses through an internationally financed agency."

IFAP, the world farm organization that represents 20 million farm families, held its conference at the Headquarters of the Food and Agriculture Organization of the United Nations in Rome.

Allan B. Kline, a hog producer from Vinton, Ia., and President of the American Farm Bureau Federation, was elected President of IFAP and Roger Savary, Secretary General. Three new members were admitted to IFAP at the Rome Meeting: Two farm organizations in Italy and one in Yugoslavia.

Delegates urged the establishment of an international authority on commodities with sufficient power to initiate and stimulate serious international consultation on a commodity basis. They considered that the present FAO Committee on Commodity Problems and the UN Interim Coordinating Committee for International Commodity Arrangements have not been given this power.

A World Food Reserve was recommended, to be operated under the joint auspices of FAO, the International Bank for Reconstruction and Development, and the Secretariat of the United Nations. The recommendation said, in part, "The Committee attach special importance to the participation of the International Bank for Reconstruction and Development in this effort. In such further exploration of this matter, the Committee urges that more attention than in the past should be paid to practical ways of reconciling the operations of such a World Food Reserve with the regular international commodity trade, with existing and proposed inter-

national individual commodity agreements, and with the price support and commodity storing operations of member governments."

On the International Wheat Agreement, IFAP urged that further efforts be made to secure an agreement to which all countries in the present Agreement would subscribe. If this were not possible, the Conference urged that governments ratify the present recommended renewal Agreement so that it can go into effect on August 1, 1953.

The IFAP Meeting expressed the hope that an international commodity agreement for sugar would result from the International Sugar Conference being held in London in July.

IFAP's Policy Committee report stated that agricultural prosperity and general prosperity go hand in hand. "It is apparent that the world needs additional food," it said. "At the same time, simply to increase agricultural production without providing for its utilization would ruin farmers. What is required is a balanced increase in industrial production and agricultural production and a commensurate improvement in markets."

The IFAP Conference stated that the world must have growing markets and to achieve this, there must be a reduction of trade restrictions.

"This objective will be more readily achieved if measures complementary with those in the domestic sphere are established on the international plane to mitigate the effects of international price disturbances."

In the discussion on dairy products, delegates agreed that dairy products are not as suitable for inclusion in multilateral international commodity agreements as certain other agricultural products. "A considerable measure of stability, however, has been obtained during recent years through long-term bilateral agreements," the final report said.

The delegates suggested that IFAP should convene international commodity meetings during the year to discuss market possibilities and demand and supply.

Mr. Nash is Information Officer, International Federation of Agricultural Producers, Washington, D. C.

South African Marketing Controls

South Africa stabilizes its markets for basic farm products in much the same way as do Canada, New Zealand, Australia, and other large producers of primary agricultural products.



by COPELAND H. MARKS

South Africa's Marketing Act of 1937 has been in effect through depression and inflation. Under both extremes, it has on the whole accomplished the purpose for which it was created: economic stability for South Africa's agriculture. In the depression years of surpluses and falling prices it acted to serve that purpose by protecting the producer. In the war and postwar years of shortages and rising prices, it has operated to protect the consumer. Having proved its adaptability to domestic needs, the act has apparently become a permanent feature in the country's agricultural economy.

The act is implemented through commodity boards, which control all the principal agricultural products in the Union except wool. There are 12 such boards now—one each for meat, corn, winter cereals (wheat and other small grains), deciduous fruit, citrus fruit, dairy products, potatoes, tobacco, chicory, dried fruit, oilseeds, and lucerne seeds. A levy imposed on all producers concerned furnishes income for administrative activities. In general, the boards are composed of representatives of producers, consumers, processors, traders, and the Department of Agriculture.

The commodity boards are coordinated through a Marketing Council, which serves also as adviser to the Minister of Agriculture. A third body, the Consumers' Advisory Committee, is a consultant group only.

Probably the most important feature of the commodity boards is the so-called one-channel system—control of a product from producer to user. All of the boards operate by this system in one form or another. The corn (mealie), winter cereals, dried fruit, oilseed, and tobacco boards have absolute

control of their products; the citrus, dairy, and chicory boards have almost complete control; and the potato, deciduous fruit, and livestock and meat boards have only partial control.

The control boards have achieved their greatest success in the production, grading, and packaging of quality products for export. They have been less successful in their application of the technical and research phases of agriculture; that is, improved cultivation methods, increased crop yields, and soil conservation. The accent has been on marketing and prices rather than on long-term farming efficiency. The act itself was primarily concerned with marketing, and the Department of Agriculture was responsible for agricultural techni-



Grapes for export are examined by government inspectors. High standards set by the Union's marketing control boards have ensured first quality export goods.

Mr. Marks, Economic Requirements Officer, American Consulate General, Madras, India, was Agricultural Reporter, American Embassy, Pretoria, Union of South Africa, when this article was written.

ques. Recently, however, the control boards have been giving financial assistance to the Department to further its research program.

Some apprehension has been expressed at the effect the Marketing Act is having on the Union's agriculture. The rigidity of control has to some extent reduced producer initiative and in the case of cooperatives has slowed the movement by removing the element of risk and by absorbing many of the functions once held by co-ops. Producer fear of a future recession has led many commodity groups to request admittance to the Marketing Act. Since these groups represent producers of commodities that do not figure prominently in the country's economy, they may never be admitted. But their request for admission is symptomatic of the influence the Marketing Act exerts and of the reputation it enjoys as a cure for the evils of agricultural instability.

Livestock and Meat Control Board

The Livestock and Meat Control Board, the latest in a series of efforts begun in 1932 to stabilize prices and distribution of meat in South Africa, is one of the newcomers to the Marketing Act. An interim control scheme was introduced under the act in 1946, but it was not until September 1, 1950, that the board was completely integrated into the act.

The board, in cooperation with the Minister of Agriculture, fixes wholesale and retail prices of livestock and meat. It arranges for quotas of slaughter stock to enter the nine major urban areas of the country and is responsible for determining and applying slaughtering quotas for the rest of the country. It is responsible for the equitable distribution of available meat supplies throughout the country at all times. It issues meat to butchers, grades and weighs carcasses, and stores meat for sale during periods of short supplies. In addition, it issues permits for slaughter, registers butchers, and sees that the trade observes regulations on grades and prices. The board's most recent function is the complete control of the sale, distribution, importation, and exportation of hides and skins.

The Livestock and Meat Control Board has been criticized more often than has any other commodity board. Producers have criticized prices; butchers have complained about the lack of meat for sale; and consumers have expressed resentment at the quality, the prices, and the quantity available. Beef

constitutes about 80 percent of all the meat consumed in the Union, and it is the acquisition of this meat that has become the greatest problem. Enough of both pork and mutton is available.

Beef shortages cannot be wholly attributed to the board. Cattle population has remained fairly constant since 1939 but beef consumption has gradually increased. Drought, erratic seasonal marketing, and inadequate storage facilities have all added to the difficulties.

The board has tried to cope with the shortages by decontrolling mutton, raising beef prices, and increasing imports, but the shortages are chronic. The problem lies in the fact that the board is trying to stabilize the price of a commodity the supply of which fluctuates widely.

Mealie Control Board

The Mealie (corn) Control Board began operating under the Marketing Act on May 1, 1939, 8 years after the government set out to aid corn producers. The board is concerned not only with distribution and price but with production efficiency and conservation of soil fertility as well. It is the sole buyer and seller of corn in the Union, and it assists by loan or grant any research work on the improvement, production, processing, and marketing of corn and corn products.

The Mealie Board has more influence on the basic economy of the Union than has any other commodity board, for corn is grown throughout the country and is the staple diet of the native population and the chief feed for poultry, dairy cattle, and pigs.

The operation of the Mealie Board is complicated by difficulties arising out of handling a crop that fluctuates in output from season-to-season and that is handled locally by more than 500 agents, who receive orders from 700 millers and distributors and ship to more than 7,000 destinations.

Nevertheless, the board has been able to keep the price of corn low; in fact it has kept the price far below that in the international market. Producer price increases have been small and, from the producers' viewpoint, inadequate. For that reason, some farmers have turned to other crops; if this shift became general, it could be serious because of the importance of corn in the Union.

Winter Cereal Board

The Winter Cereal Scheme for wheat, oats, bar-

ley, and rye has been in effect since 1949. For the preceding 14 years, wheat was the only winter cereal whose price and distribution were under government supervision, first under the Wheat Industry Control Act of 1935 and, since 1938, under the Marketing Act of 1937.

The Winter Cereal Board, through its agents, is sole buyer and seller of wheat, oats, barley, and rye. When the domestic crop does not meet consumption requirements, the board imports grain and supervises its distribution. The board fixes prices each year for the various grades and classes of cereals, both wholesale and retail. It also sets the selling price of winter cereal products, subject to approval by the Minister of Agriculture.

A chief problem of the board has been storage of wheat and other winter cereals, especially during harvest, when there is also need to store corn. The problem promises to be short-lived, however, now that plans are under way for the bulk handling of wheat.

Deciduous Fruit Control Board

The elimination of the vital export market for the Union's deciduous fruit at the outbreak of World War II was responsible for bringing into being the Deciduous Fruit Control Board. Some move toward marketing control was made as early as 1926 with the organization of the South African Cooperative Deciduous Fruit Exchange, but it was made up of growers and had no regulatory powers.

The new plan was known as the South African Deciduous Fruit Regulatory Scheme and was constituted in October 1939 under partial authority of the Marketing Act. This scheme, which was expanded under the War Measures Act of 1947, continued until 1951, when the measures were scheduled to lapse. At that time the Deciduous Fruit Scheme was promulgated under the Marketing Act, replacing the earlier war and postwar measures. The new scheme is intended to apply primarily to the western Cape Province, where almost all the fresh fruit industry is located.

The Deciduous Fruit Board has a more complex structure than the other commodity boards because of the many different types of fruit that it controls or handles. It is empowered to buy deciduous fruit and to grade, pack, store, and process it. The board can sell the fruit in either fresh or processed form or withhold any portion from the market. It is the sole exporter of all deciduous fruit and devotes

a great deal of time and effort to developing new foreign outlets for the fruit. The board exercises distributive control over grapes, plums, and pears produced in the western Cape Province and marketed outside the area. Apricots, apples, and peaches are not controlled, and free sales are permissible throughout the Union. In the noncontrolled Provinces of Natal, Transvaal, and the Orange Free State the board's only function is to regulate distribution of the fruit grown in the western Cape Province.

The board imposes a levy on all deciduous fruit exported from the Union and on grapes, peaches, nectarines, plums, and pears produced in the controlled area for sale or consumption in the fresh state. The board cannot fix prices, although one of its functions is to stabilize prices through distribution. Experience has shown that fixed prices are unsuitable for a highly perishable product whose flow to market is determined by seasonal conditions and cultural practices.

Citrus Fruit Control Board

Citrus growers in the Union, like deciduous fruit producers, have always looked abroad for much of their market and also found themselves without that market after World War II began and in need of a central body to handle marketing problems for the industry. That body was provided for in December 1939 in the South African Citrus Scheme, which operated under the Marketing Act. The powers of its board related to prewar conditions, however, and were of little help in alleviating the situation until they were amended through the War Measures Act of 1947 and the board was declared the sole exporter. At the same time it was given power to regulate the flow of fruit to the domestic market. The proceeds from the exportable fruit are pooled to ensure equitable distribution to growers. What fruit cannot be exported is either given to social welfare organizations or put on local markets. In providing for local consumption, the board tries to make certain that the various markets are regularly supplied with fruit from centrally located warehouses and that, by making fullest use of early and late crops, citrus fruit is available throughout the year.

Growers who have more than 300 trees must market their fruit through the board; plans are under way to bring all growers under board control. Citrus growers strongly support the board, since it

is apparently felt that coordinated marketing is necessary for an industry that depends on exports for more than 85 percent of its net income.

Consumers have criticized the board for keeping citrus prices too high, but actually prices are lower than they were before the war.

Dairy Control Board

The Dairy Control Board was one of the few that operated exclusively under the Marketing Act during World War II. It was established in October 1940 to succeed the marketing board set up a decade earlier to combat the slump in prices and to regulate exports.

The Dairy Board controls the distribution of creamery butter and factory cheese, all of which is sold through its agents; the proceeds are pooled by grade for equitable distribution to manufacturers. (Produce from South West Africa, Bechuanaland, and Swaziland are included in these pools.) The board also fixes the prices of industrial dairy products from producer to consumer. It is the sole importer and exporter of creamery butter and cheese, though the quantities involved are regulated by the Minister of Agriculture. The board

also registers manufacturers of butter, cheese, milk powder, and condensed milk, thereby adjusting imports and exports to domestic output and needs.

Potato Control Board

Under the war Emergency Measures of 1947 the first steps were taken to cope with the Union's chronic surpluses of potatoes. After these Measures lapsed, the Potato Control Board was included within the Marketing Act, on July 1, 1951.

The Potato Board differs from the other commodity boards in that it does not directly fix prices; potatoes are the only major commodity in the Union over which no price control is exercised. The board is, however, authorized to buy and sell white potatoes in the nine large urban areas of the Union and to impose a levy on all white potatoes sold in the areas. None is imposed in the noncontrolled rural areas or on potatoes earmarked for export.

As sole exporter of potatoes, the board successfully established a market in the Far East and the adjacent African territories. This export market has been a stabilizing factor but has not entirely overcome high prices and seasonal shortages.



Corn moves into storage at Hennenman, Orange Free State. The buying and selling of corn is carefully controlled in the Union, for corn is the staple food of the native African.

Tobacco Control Board

The marketing of tobacco in the Union has been controlled to some extent since 1932 and has been handled under the Marketing Act since April 1, 1939. Unlike the other commodity boards, the Tobacco Control Board functions primarily as a supervising body. When it was established, the ten tobacco cooperatives in the Union were appointed as agents of the board and as such have since carried out the major control operations for the tobacco industry. The Central Cooperative Tobacco Company handles all tobacco leaf sales; it buys from producers and allocates leaf supplies to the various manufacturers. The Central Cooperative for Virginia Tobacco handles exports of that tobacco, and the Western Province Cooperative handles those of Turkish tobacco. Imports, which are extremely limited, are negotiated by the manufacturers.

The functions handled by the board include only imposing levies on leaf tobacco; fixing the selling prices of leaf tobacco, both domestic and imported, with the approval of the Minister of Agriculture; directing the marketing of all tobacco produced in the Union through cooperative channels; standard-

izing the grading; and regulating supply and demand.

The Tobacco Board is a producer's organization that emphasizes protection of the domestic industry. Manufacturers, represented by only 2 of the 13 board members, exert little influence on policy. They do not favor the rigid restrictions on imports, for they state that the local leaf tobacco is inferior in quality and imports are needed to maintain some degree of quality. It is unlikely, however, that the policy will be changed.

Chicory Control Board

Chicory is the only minor agricultural product that is included in the Marketing Act. Its control scheme was promulgated in November 1939, after a vote of producers.

The Chicory Control Board fixes prices, buys and sells the root in the principal producing areas, and processes it.

The Chicory Board is considered a model for efficiency and usefulness to both producer and manufacturer. Its problems are simpler, however, than those of a board representing an industry that is not so small and so concentrated.



Citrus groves in the Rustenberg area of Pretoria. Most of the fruit grown in the citrus groves of the Union is sold abroad through a system of organized marketing.

Dried Fruit Control Board

The Dried Fruit Board was the first to be created under authority of the Marketing Act. It has been operating since 1938, first with a limited objective of improving the grade and quality of dried fruit and since 1942 with price regulating powers.

The board buys and sells the dried fruit and grades, packs, stores, and processes it. It is also the sole exporter and importer.

From time to time the board has been criticized by producers and packers because of its efforts to assure supplies of dried fruit to the consumer at fixed prices, since that cuts the quantity available for the more profitable export trade. It is generally recognized, however, that the board has done much to stabilize the industry.

Oilseed Control Board

The newest commodity board is the Oilseed Con-

trol Board, promulgated in February 1952. The control scheme relates only to groundnuts (peanuts) and sunflower seed but does not include the oil expressed from the seed.

The primary functions of the board are to buy and sell oilseeds and to assist by loan or grant of funds any research work relating to the improvement of the oilseed industry. The board may, with the approval of the Minister of Agriculture, fix prices and may advise him on grades, quality, and matters relating to marketing or processing and to the regulation of imports and exports.

Lucerne Control Board

The Lucerne Control Board was also promulgated in February 1952, just 3 days before the Oilseed Board was set up. The Lucerne Board has the same authority and serves in the same advisory capacity as does the Oilseed Board.

Land Reform in Poland

By ERNEST KOENIG

The land reform and land settlement process that has taken place in Poland since World War II still commands great interest. Not only was it the most far reaching of all the land reforms carried out in the now Communist-dominated countries of Eastern Europe—in terms of the area confiscated as well as in terms of the number of beneficiaries—but it was also the one reform that has as yet not been superseded to any significant extent by collectivization—as in other communist countries. The structure of land tenure resulting from this reform thus underlies Poland's present agricultural development.

The Polish postwar land reform was inaugurated in 1944, immediately after the Moscow-sponsored so-called "Polish Committee of National Liberation," the forerunner of the present Communist government, had installed itself on Polish soil. The reform consisted of two distinct parts: land distribution in that section of present-day Poland that formed part of its prewar territory, and land settlement in the former German provinces that are now under Polish administration. The legal aspects of this process are contained in the "Decree of September 6, 1944, concerning confiscation and land distribution," which was supplemented by the "Decree

of September 6, 1946, concerning land settlement on the recovered territory."¹

Legal Provisions

According to these laws all land belonging to German citizens, to Polish citizens of German nationality, and to Polish collaborators with Germany in wartime was to be confiscated without compensation. All other landowners were to be deprived of that part of their property that exceeded 100 hectares² in total area or 50 hectares of arable land. In the Provinces of Poznan, Pomorze, and Slask the limit of property exempt from confiscation was to be 100 hectares in total area, regardless of the amount of arable land included therein.

Poles whose land was confiscated were to leave the district in which their property was located within 3 days after confiscation. Those among them not barred from compensation were to receive monthly allowances corresponding to the monthly

¹ "Recovered territory" is the official Polish designation for the former German territories assigned to Polish administration under the terms of the Potsdam conference. The United States Government does not necessarily recognize the former German territories as an integral part of Poland. For the purpose of this study the former German provinces are referred to as "new territory," that part of Poland which formed part of prewar Poland as "old territory."

² One hectare equals 2.47 acres.

Mr. Koenig is Agricultural Economist, Western European and African Division, Regional Investigations Branch, FAS.

salary of certain categories of civil servants or were to acquire small farms outside the district of their former residence.

All confiscated land was to be assigned to a "land fund." From this fund, land was to be distributed among the landless and among small and medium peasants, with the exception of land destined for "model farms" and farms under public administration.

The area of newly created farms was not to exceed 5 hectares of average quality soil, or 2 hectares in the case of fruit and vegetable farms. The price of 1 hectare of land was to equal the value of 15 quintals of rye. Except for a small down payment, which could be postponed for 3 years, payment could be spread over a period of 10 years for small and medium peasants, and over 20 years for the landless. Land was to be received free of other debts, the state taking responsibility for prior mortgages.

Execution of the Program

The land reform was carried out in great haste and not in conformity with the law. In the territories liberated from the Germans by the middle of 1944, confiscation started immediately after the Lublin government had taken over the administration. In the rest of the old territory it was largely executed in the wake of the advancing Red Army. In the new territory, which had been partly depopulated by the flight of most of the German population and from where the remaining Germans had been deported in the early postwar years, it assumed the form of a land settlement movement, drawing on Poles repatriated from the West and Russia, and on hundreds of thousands of Polish peasants transplanted from the overpopulated parts of the old territory to the now vacant former German lands.

In the country as a whole, nearly 9,800,000 hectares of farm land was confiscated. The total hectareage confiscated was much larger, for forest land is not included in this figure. Official statistics dealing with land reform make it impossible to ascertain the total forest area expropriated.³

In the old territory 21 percent of the agricultural area was affected by the land reform but only 6

³ In October 1948, 85.5 percent of the total forest land was reported to be government owned, 3.5 percent was owned by provincial bodies, and only 11 percent belonged to private individuals. The latter usually owned small forests, not exceeding 25 hectares.

TABLE 1.—*Number of farms confiscated and area, 1949*

Location	Number	Area (in 1,000 hectares)	Percent of agricultural area
Old territories:			
Polish farms.....	9,707	2,179	----
German farms.....	98,750	909	----
Total.....	108,457	3,089	21
New territories:			
German farms.....	1484,400	26,707	100
Grand total....	592,457	29,796	46.9

Source: *Rocznik Statystyczny, 1949*. Główny Urząd Statystyczny, Warsaw, 1950

¹ Excludes holdings under 0.5 hectare (653,400 holdings with 80,700 hectares).

² Includes 441,600 hectares of forest land.

³ Includes an estimated 1 million hectares of forest land.

TABLE 2.—*Allocation of land confiscated*

Recipient	Area (in 1,000 hectares)	Percent
Old territories:		
Public administration ¹	1,098.7	36
Individuals.....	1,989.9	64
Total.....	3,088.6	100
New territories:		
Public administration ¹	2,702.1	40
Individuals.....	4,004.9	60
Total.....	6,707.0	100
Whole country:		
Public administration ¹	23,800.8	39
Individuals.....	5,994.8	61
Total.....	29,795.6	100

Source: *Rocznik Statystyczny, 1949*. Główny Urząd Statystyczny, Warsaw, 1950.

¹ State farms, agricultural schools, state forest administration, provincial administration, peasant cooperatives (Peasant's Self-Help Union), public utilities, etc.

² Includes 98,000 hectares of water and unproductive land.

³ Includes an estimated 1 million hectares of forest land.

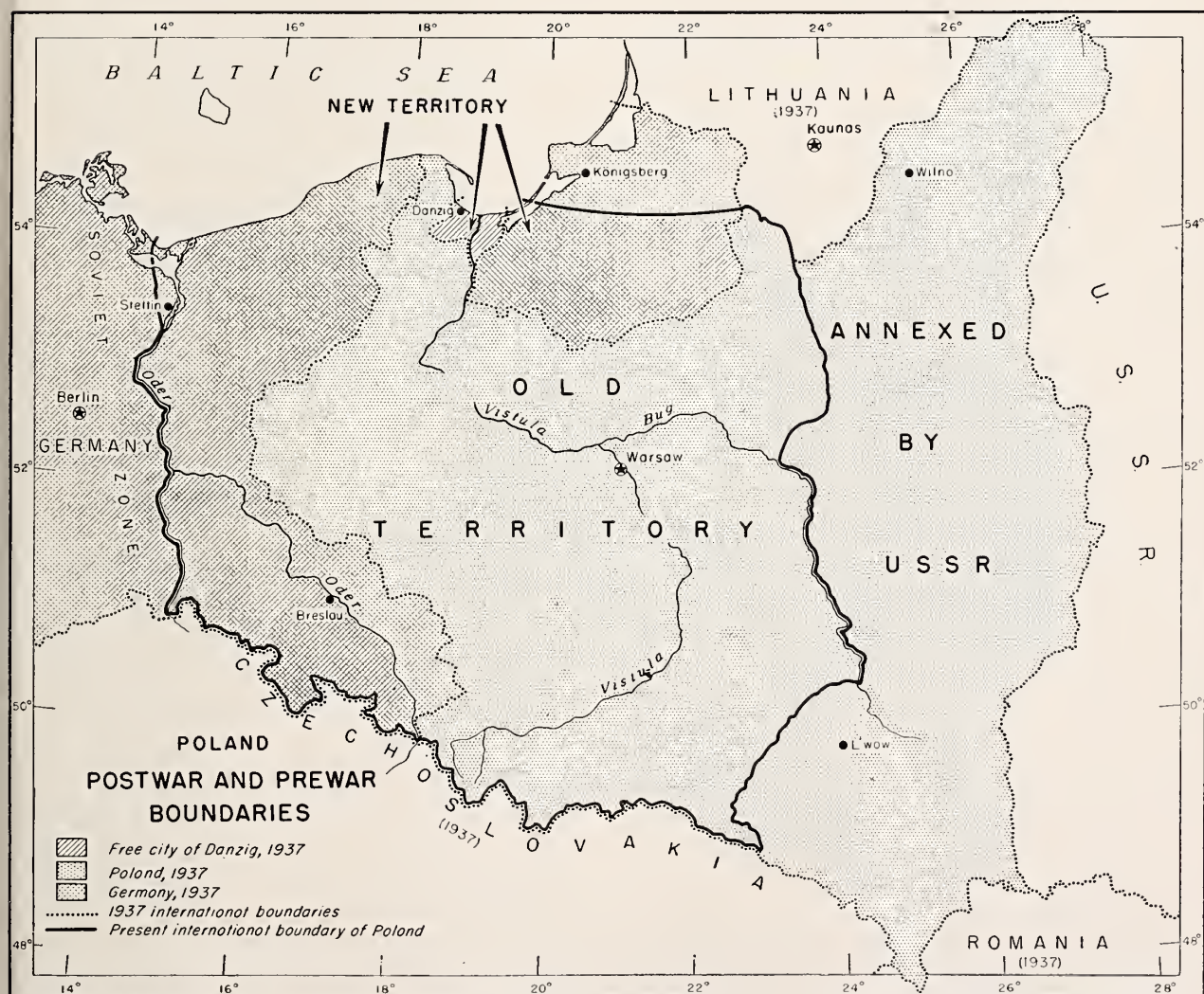
percent of all holdings. Had the area so confiscated in the old territory been equally redistributed among the remaining farms, each would have received 1.8 hectares. Had it been redistributed in equal shares only among the farms of less than 5 hectares, each would have received a larger share but would still hardly have become economically sound, and the problem of how to deal with the great mass of landless peasants would not have been solved.

The solution was not sought in this way, however. Great numbers of Poland's land hungry peasants were to find land in the newly acquired western territories. Yet neither there nor in the old territory was the confiscated land fully distributed among individual peasants. Only 64 percent in the old territory was distributed among private individuals; 36 percent remained in the hands of the state. Similarly, in the new territory only 60 percent was to be distributed among individual peasants, and 40 percent assigned to state and public farms. For the country as a whole the corresponding proportions were 61 and 39 percent.

About a million peasants benefited from the land reform. Approximately half of them received land in the old territory; the other half was settled in

the former German lands. The average share per recipient for the country as a whole was 6.1 hectares, but it was higher in the new territory than in the old. In the latter, beneficiaries of the land reform received on the average 3.9 hectares; in the former, 8.2 hectares. This difference reflects the government's desire to make the newly gained provinces more attractive to applicants for land from the old provinces.

The background of those receiving land in the western territories is not known. It might be surmised that they had been mostly landless peasants or owners of small farms. In the old territory almost 40 percent of all beneficiaries were landless peasants; more than 60 percent were landless peasants and peasants owning less than 2 hectares of



land. They obtained 65 and 76 percent, respectively, of the land distributed among private individuals in the old territory.

Ownership Rights

The distribution of farms and farmland to individuals implied, but did not for a long time entail, that the holder of newly acquired land also became owner—that he received title to such land. It was only in the fall of 1951, by the decree of September 6, that all those who still operated farms without title deeds were granted ownership rights.

Ownership rights do not apply to farms exceeding 15 hectares that were fully acquired in consequence of the land distribution nor to that part of land acquired during the reform that makes a once small farm now exceed 15 hectares. Furthermore, buildings and equipment on farms of less than 15 hectares that in capacity correspond to much larger holdings may not be considered as the private property of the farm owner.

The Land Problem and Government Policy

The main defects of prewar Poland's agrarian structure were reflected in the predominance of small and dwarf holdings, the limited importance of medium sized holdings, and the concentration of large areas in the hands of big landlords. This type of landownership—which dates from the nineteenth century, when the peasants were liberated from serfdom—was characterized by insufficient capital on the average farm. The ensuing low productivity together with the great density of farm population led to a high propensity to consume on the part of the peasantry; hence to only small marketable surpluses on most farms and to lack of capital accumulation. This situation was aggravated by the rapid growth of the agricultural population and the limited capacity of the non-agricultural sector of the economy to absorb farm products as well as rural excess population. In prewar times farms whose area was below 5-6 hectares were generally considered economically unsound. They were too small to yield more than a bare subsistence standard to the farm family and contributed relatively little to commercial supplies. Their productivity was also impaired by excessive fragmentation into minute strips of land.

Although the subdivision and redistribution of large estates appeared the cure-all to most Polish peasants, that policy could not alone be expected

TABLE 3.—*Distribution of confiscated land among individuals up to 1949*

Land taken from—	Number of recipients (in thousands)	Area distributed (in 1,000 hectares)	Average share, per recipient (in hectares)
Old territories:			
Polish estates	407.5	1,210.9	2.9
German estates	90.4	736.2	8.1
Total or average	497.9	11,947.1	3.9
New territories:			
Polish and German estates	483.3	4,004.9	8.2
Grand total	981.2	5,952.0	6.1

Source: *Rocznik Statystyczny, 1949*. Główny Urząd Statystyczny, Warsaw, 1950.

¹ About 42,700 hectares of agricultural land destined for distribution had not been distributed by 1949, and are therefore not included.

TABLE 4.—*Number and area of farms owned or managed by the state or other public organizations at the beginning of 1949*

Recipient	Number	Area (in hectares)
State farms	5,080	1,605,728
Centers for agricultural education	1,366	61,005
Ministry of Education	489	59,364
Ministry of Health	199	18,236
Peasant's Self Help Union	3,391	78,569
Provincial administration	313	35,505
Political organizations	105	15,591
Unknown	2,422	328,607
Total	13,365	2,202,605

to solve all the complex problems besetting the Polish agricultural economy. Economic reform transcending by far mere changes in the land structure would have been necessary. The best the policy of land reform could possibly have achieved was to enlarge the average farm to such an extent as to secure an increase in the marketable product as well as an improvement in the consumption of the average farm family, by creating medium sized holdings. This solution would have benefited only part of the peasantry; it would not have benefited those most afflicted by the inequitable and inefficient system of land tenure. An alternative policy would have been to endow the greatest possible number of landless peasants and owners of dwarf farms with land, thus foregoing increases in productivity and production but alleviating thereby

slightly—and perhaps only temporarily—the plight of the lowest strata of the farm population.

The Polish Government, aware of these alternatives, was influenced by conflicting considerations in its land policy. On the one hand, it had to obtain the support of the peasantry, or at least to neutralize its opposition to the new political order, and had therefore actually to distribute a great part of the confiscated land. On the other hand, it desired to retain large agricultural areas under public administration in view of its goal ultimately to socialize agriculture—the real and only solution of the agrarian problem from its point of view. In addition the government recognized the urgency of increasing production as soon as possible, for it had been catastrophically reduced in consequence of war and occupation. Hence, land had to be given to whoever was capable of tilling it, or of preventing its further deterioration in the depopulated western territories. This last consideration contradicted the first two motives and put government

land policy into a perpetual dilemma. Land managed by public bodies was far less productive than it would have been if tilled by independent peasants, but on the new territory where the government was sometimes willing to give more land to individuals than it actually did, the new settlers were incapable of taking care of it.

Results of Reform and Resettlement

In 1949, when land reform and land resettlement were practically completed, the proportion of large farms (50 hectares and over) in Poland was smaller than in any prewar year, the proportion of 10- to 50-hectare farms was about the same, and that of 5- to 10-hectare farms was slightly larger. The large farms had a smaller share of the total agricultural area; the two other groups had a considerably larger share, compared with 1921.⁴ State owned land covered 88 percent of the farms in the size group 50 hectares and over, but only about 3 per-

⁴ See footnote 1, table 5.

TABLE 5.—Number and area of private and public farms in prewar and postwar Poland¹

Size of farms (in hectares)	Territory within present boundaries								Prewar territory					
	1949				Old territory (in 1931)		New territory (in 1939)		1921				1931	
	Holdings		Agricultural area		Holdings ²		Holdings ³		Holdings		Agricultural area ⁴		Holdings	
	Num- ber	Per- cent	Hec- tares	Per- cent	Num- ber	Per- cent	Num- ber	Per- cent	Num- ber	Per- cent	Hec- tares	Per- cent	Num- ber	Per- cent
Less than 2-----	962.1	28.7	1,048.8	5.2	377.8	22.6	112.9	23.3	1,108.7	34	1,075.0	3.5	747.1	25.5
2-5-----	1,084.0	32.3	3,790.2	18.9	638.5	38.2	89.1	18.4	1,002.0	31	3,432.4	11.3	1,136.1	38.7
5-10-----	906.3	27.0	6,848.6	34.1	440.7	26.4	104.7	21.6	733.3	22	5,157.0	17.0	728.7	24.8
10-50 ⁵ -----	392.6	11.7	6,113.4	30.4	202.6	12.2	157.9	32.6	387.9	12	6,331.5	21.0	309.1	10.5
50 and over ⁶ -----	10.3	.3	2,292.8	11.4	10.9	.6	19.8	4.1	30.1	1.0	14,344.0	47.2	14.7	.5
Total-----	3,355.3	100.0	720,093.8	100.0	81,670.5	100.0	9484.4	100.0	3,262.0	100.0	30,339.9	100.0	2,935.7	100.0

Source: *Rocznik Statystyczny 1949*, Główny Urząd Statystyczny, Warsaw, 1950. *Les questions agraires en Pologne*, by Stanislas Jagusz, Librairie technique et économique, Paris, n.d. (probably 1934).

¹ Prewar and postwar comparisons are only approximative because of basic differences in underlying data. Poland's only prewar census of land holdings, in 1921, was neither complete nor based on the same land use classification as 1949 data.

² Includes agricultural land with some forest land.

³ Includes agricultural and forest land.

⁴ Includes total agricultural land and about half of the forest land.

⁵ Includes 6,329 public estate farms with an area of 169,185 hectares (1949).

⁶ Includes 7,027 public estate farms with an area of 2,033,120 (1949).

⁷ Includes a considerable amount of forest land. It does not add up to the total agricultural area (20,867,000 hectares) partly because of the defectiveness of the Polish census of land holdings, partly because the land use classification is based on prewar conditions and no longer corresponds to the present state of affairs.

⁸ Excludes 113,500 holdings of unknown size.

⁹ Excludes 653,400 holdings under 0.5 hectare.

cent in the size group 10-50 hectares and practically none of the land in the group of farms of 5-10 hectares. These comparisons indicate a strengthening in the position of the middle peasant, which is probably due as much to the land reform of the interwar period as to the postwar land reform.

After completion of the postwar land reform and land settlement program farms of 5 hectares or less still represented 61 percent of all farms—nearly the same proportion as in 1921 (65 percent) and in 1931 (64 percent) within Poland's prewar boundaries, or within the old territory in 1931 (60.8 percent). The total area of these holdings slightly increased and their proportional share in the total agricultural area increased considerably—from 14.8 to 24.1 percent, yet the average size of holdings in this group was in 1949 practically the same as in 1921—more than 2 hectares. Although the land reform created on the new territory farms whose average size is larger than that of the new or enlarged farms in the old territory, the structure of land tenure in the country as a whole has thus retained the main defects of the past.

However, other changes that have taken place since the war have altered to a certain degree the position of the peasant in the Polish economy. As a result of losses and shifts in population and of industrialization the density of the agricultural population has decreased from 83 persons per 100 hectares of agricultural land in prewar Poland to 57 persons in 1950 on the present territory, the amount of agricultural land per person of the agricultural population having increased from 1.2 to 1.7 hectares. This change came about because total population decreased, and hence also the total agricultural population, and because the proportion of the latter in the total population declined—from about 61 percent before the war to about 48 percent in 1950. The reduction in the density of the agricultural population by about one-third together with an enormous increase in domestic demand for agricultural products—the former partly, the latter entirely, due to industrialization—have tended to make a larger number of farms economically sound. Fewer people are now maintained on such farms, and, if it were not for the burden of compulsory deliveries and taxation, their marketable surplus or per capita consumption on the farm might be higher than in the past. These developments, however, came about independently of the land reform.

Conclusions

The results of the postwar land reform and land settlement process itself may be summarized as follows:

1. Landless peasants and the owners of the smallest of dwarf farms were the main beneficiaries. However, their net gains are not as large as might appear from the amount of land received, since many of them (especially the resettlers in the new territory) had given up farmland in their old communities.

2. The terms of compensation for land received were favorable, more favorable than those of the interwar land reform, when the peasant's savings were used for land purchase, which led to overcapitalization of land instead of to farm improvement.

3. The terms of the law were not honored with regard to those Poles who were entitled to compensation for their confiscated property. That brought hardships to many of them, not to speak of the numerous German peasants to whom expropriation and expulsion meant outright destitution.

4. The predominance of small farms with low productivity, low savings, and relatively small contributions to commercial supplies has not been altered. The promise made by the government at the outset of the reform, namely, to create "a new agrarian structure based on highly productive farms" has thus not been fulfilled; nor has the promise been kept that the new holdings emerging from the reform would constitute private property, in view of the fact that about 40 percent of the confiscated area remained public property.

5. The postwar land reform and land settlement process has thus failed to improve decidedly Poland's agrarian structure. Being motivated by political considerations rather than by economic rationality, it has also resulted in actually hampering government policy aimed at industrialization, since the present land structure prevents agricultural production from keeping pace with the requirements of rapid industrial growth.

The land structure emerging from the postwar reform is thus from the point of view of the Communist Polish government only a temporary stage in the history of Polish land tenure, a structure that is to be replaced as soon as circumstances will permit by collectivization.

Point Four Trainees In the Commonwealth of Puerto Rico

By T. SWANN HARDING

The Agricultural Experiment Station of the University of Puerto Rico has become a focal point for the dissemination of information to Point Four Program visitors from all over the world. Located as it is in a thickly populated country with limited arable acreage, and well within the Tropical Zone, it is an unusually valuable place to visit for agriculturists who work in similar environments anywhere else in the world.

Under its present Director, Arturo Roque, the station has made remarkable progress. The large scientific staff at the main station and at the several substations is well trained and highly efficient. This staff has grown from about 30 to more than 100 in the 10 years under Director Roque. Facilities are ample, equipment is modern, and the buildings are attractive and functional.

The station, of course, collaborates closely with the College of Agriculture and the Federal Experiment Station at Mayaguez, as well as with the Puerto Rican Departments of Education, Sanitation, and Agriculture and the Agricultural Extension Service. It is, however, financed and operated like the State agricultural experiment stations.

Originating in 1910 as the Sugar Cane Experiment Station of the Sugar Producer's Association of Puerto Rico, the station was transferred to the direction of the Island's Board of Commissioners of Agriculture soon thereafter. In 1917 it became part of the Puerto Rican Department of Agriculture and Labor, later the Department of Agriculture and Commerce.

On November 16, 1933, the institution became the Agricultural Experiment Station of the College of Agriculture, University of Puerto Rico. It benefits from the Hatch, Adams, Purnell and related Acts as do the State experiment stations. It has long maintained close contact with the Department of Agriculture and other United States agricultural research agencies. Its position in these respects was unaltered by the recent change in political status of Puerto Rico from a possession *of* to a Commonwealth associated *with* the United States.

The station has performed much work of out-

standing value and is widely regarded as a leading institution of agricultural research in the Tropics.

As a result of the Technical Training Program in Agriculture, first a trickle then a flood of visitors has come to the station during the past 2 years to learn about its research projects and tested techniques. These trainees have been sent by the Mutual Security Agency, the Food and Agriculture Organization, the Foreign Agricultural Service (formerly Office of Foreign Agricultural Relations), and the Department of State, or by several of these agencies combined.

Few of these technical tourists have any choice about whether they will visit Puerto Rico, for their programs have usually been arranged by the agencies sending them. But obviously, if their native land is tropical or subtropical, densely populated, and not too lavishly endowed with arable land, they can benefit enormously by their visit. Many of the visitors not only have never seen Puerto Rico before but have never even heard it mentioned or located it on the map.

Some trainees are also sent to the station by the Governments of Cuba, the Dominican Republic, and Jamaica through the United States Departments of State and Agriculture to study the latest research and cultural practices used with sugarcane and to inquire into the functioning of the Department of Agricultural Economics and Rural Sociology.

Very often trainees have not the least notion of what they should investigate. The task of guidance devolves largely upon the station's editor, E. Molinary-Salés, with requisite advice and assistance from the members of the technical staff. The editor gladly undertakes the time-consuming and difficult task of arranging the necessary contacts with station technicians, planning itineraries, arranging trips, and suggesting short study courses, thus in general smoothing the way of the visitors;

Mr. Harding is English Technical Editor, Puerto Rico Agricultural Experiment Station. In preparing this article, he had the assistance of E. Molinary-Sales, Spanish editor at the Station.

for this is in the long run stimulating and rewarding work, however much of it necessarily interferes with routine duties.

The first job is to determine what will help the trainees most in their work at home. Quite often it turns out that their subjects of study differ materially from the plan promulgated for them before they came to Puerto Rico.

If the trainees are scientific or technical personnel, they find abundant material in the research already performed and published in the station's bulletins, technical papers, and its quarterly *Journal of Agriculture*. They discuss with the proper members of the station's staff the research projects currently under way. They visit the substations and seed farms if this seems desirable and, if they wish, can actually participate in field experiments. Naturally many of them also visit the Federal Experiment Station and the College of Agriculture.

Most of the trainees who visit the station come

from the so-called underdeveloped countries—those deficient in trained agriculturists and technicians and whose agriculture is largely in the primitive stage. Many know little about such experimental techniques as are used at the station to determine the agricultural practices best suited to increase crop production. By study, observation, and actual participation they acquire considerable information at first hand, and this knowledge is taken back to their homes and there used to improve the local agriculture.

Some trainees know exactly what they want to investigate when they visit the station. Some come to study specific crops like sugarcane or coffee or tobacco. Those from the most underdeveloped countries are mainly interested in subsistence crops.

Trainees from Iraq, Pakistan, Egypt, and Nepal manifested great eagerness to pursue rural sociology and agricultural economics. A Chinese was mainly concerned with rum fermentation and distillation, and a Costa Rican with the functioning of the



Point Four trainees come from all over the world to visit Puerto Rico's agricultural experiment station. This group from the Orient was photographed with the station's director (center) and its editor (under the arch at the right).

Office of the Editor. Few of the visitors have in their own countries such facilities as those provided at the station for study of the Island's agricultural problems. If there were experiment stations at home, budgets were so restricted that they could scarcely be stretched to meet the salaries of employees; in some countries local politics greatly interfered with the operations.

Without exception the trainees express great satisfaction with their findings. Thus knowledge is dispensed, techniques are shared, skills are imparted, and cultural and other practices are widely disseminated over the globe. While such gifts are of tremendous and never-ending benefit to those who receive, they in no sense impoverish the giver, and they involve little extra expenditure.

Very often the trainees have spent time in places in the United States where, to be sure, they observed highly advanced technical agricultural procedures. But, although these visits fulfilled various essential training needs, they were sometimes of

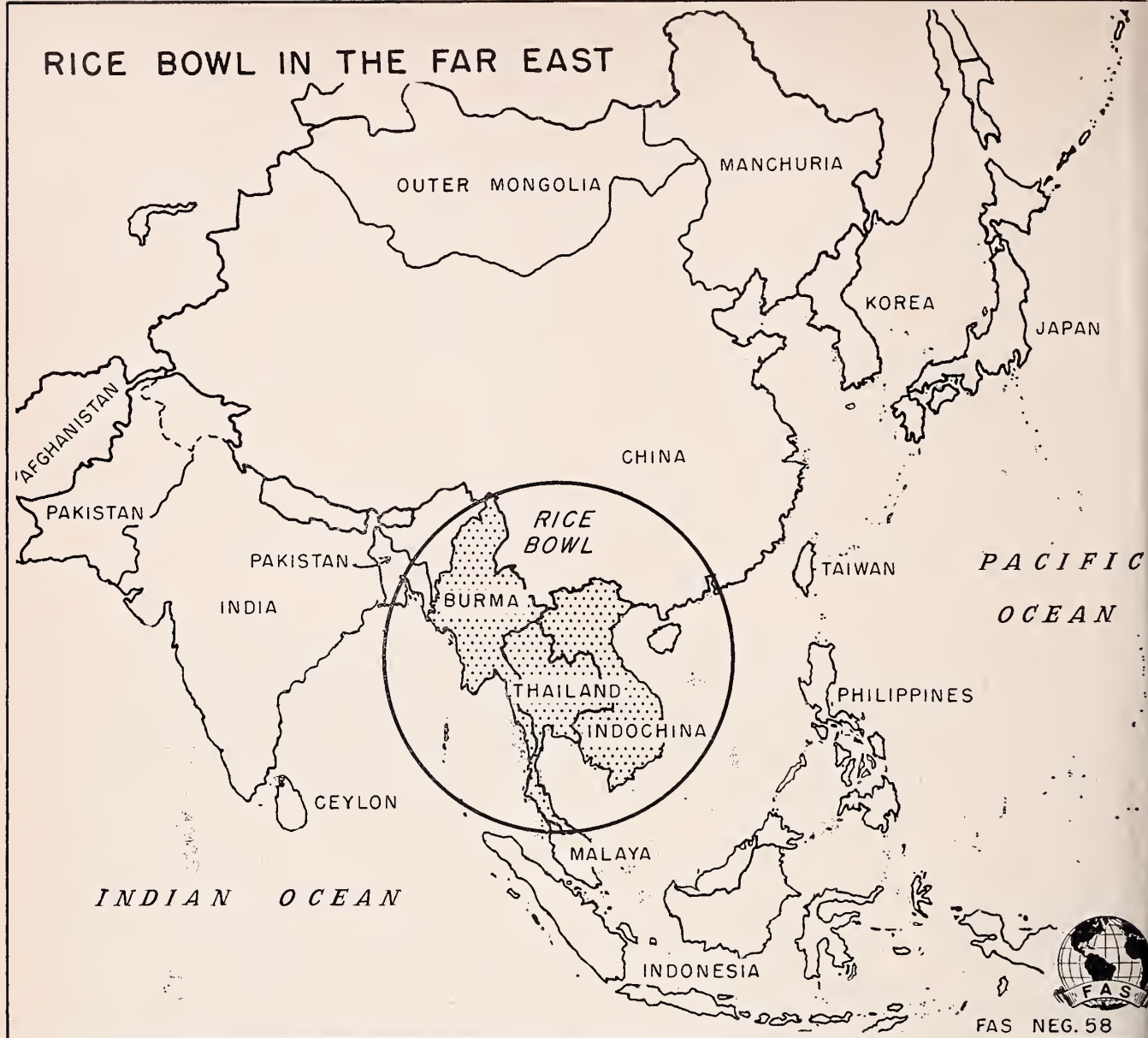
kinds that could not be adapted to conditions in their own countries, because doing so would exceed budgetary limitations or would prove inappropriate.

Puerto Rico, which is only 35 by 100 miles, with 630 people to the square mile, 200 or 300 distinct soil types, rainfall varying from under 40 to more than 200 inches, elevations ranging from sea level to 4,400 feet, several climatic zones, no forests and no timber, and having 220 persons per 100 arable acres, presents just the kinds of problems in the solution of which these migratory students are most interested. This land that is constantly raising its standards of living by "Operation Bootstrap" is where they find precisely what they most need to know.

A list of a selected few of the recent trainees is appended to give an idea of the variety of their origins and interests. But in addition to these individuals, groups of a dozen or more come to the station ever so often too.

<i>Name</i>	<i>From—</i>	<i>Interest</i>	<i>At the station—</i> <i>1951</i>
Rogelio Coto Monge	Costa Rica	Research, extension	Nov. 19-Dec. 4, 1952
Syed Hedayet Hedayetullah	Pakistan	Cooperative extension	Jul. 28-Aug. 2.
José Austria Mendoza	Philippines	Agricultural extension	Sept. 15-19.
Nicolás Ruzol Peñamora			
Fernando Madrid Mabalay			
Roberto Barreto	Cuba	Sugarcane research	Nov. 17-Dec. 13.
Luis Guardia	Bolivia	Cooperative extension	Oct. 6-15.
Julio A. Vega	Panama	Economics, rural sociology	Oct. 15-20.
Horacio A. Campos	Uruguay	do	Oct. 15-20.
Chacker Jotisalikara	Thailand	Horticulture	Nov. 17-28.
Aslam Siddiqi	Pakistan	Agricultural information	Oct. 7.
Luis E. Heysen	Peru	General	Nov. 14.
Saleh Ismail Saleh	Egypt	Economics, rural sociology	Nov. 21.
Mg. Thien Tun	Burma	Research, extension	Dec. 12-15.
Khalid Yahia Izzi	Iraq	Research	Dec. 12.
Antonio del Rio Ganoza	Peru	4-H clubs, rural sociology	Various dates, October-December, 1953
Sau-Ha Mok (Miss)	China	Extension, economics, sociology	Jan. 31-Feb. 2.
Vincent E. Walker	Jamaica	Extension, economics	Jan. 19.
Allan Duckworth Aiken	do	Economics	Jan. 19-21.
Aly Abdel-Azim Allam	Egypt	Rural sociology	Feb. 25.
Adenola A. Igun	Nigeria	Economics, rural sociology	Feb. 16-18.
Miguel A. Cestero Martinez	Dominican Republic	Grasses, grassland	Feb. 3-6.
Crispin K. Decanay	Philippines	Fertilizer distribution	Feb. 2-14, 26.
Francisco del R. de Jesús			
Juan Valeros	Philippines	Extension, economics, sociology	Jan. 31, Feb. 2.
Khaja Abdul Gafoor	India	Social welfare administration	Feb. 4-5.
Sa'di Murad Khayyat	Jordan	Rural sociology	Feb. 2.
Aaron Yofe	Israel	Subtropical horticulture	Feb. 17.
Alfred K. Asem	Gold Coast	Cooperative extension	Mar. 7-9.
Chandra Bir Gurung	Nepal	Land tenure, rural sociology	Feb. 2.

RICE BOWL IN THE FAR EAST



FAS NEG. 58

UNITED STATES
GOVERNMENT PRINTING OFFICE
DIVISION OF PUBLIC DOCUMENTS
WASHINGTON 25, D. C.
OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, \$300
(CPO)

If you do not desire to continue receiving this publication, please CHECK HERE ☐ tear off this label and return it to the above address. Your name will then be promptly removed from the appropriate mailing list.

b

b